Attachment 2.I 2025 Future Conditions Weave Analyses

	DAVE ED, I NOW		REEWAY			RKSHEE	Τ		
Genera	al Informatio	on			Site Information				
Analyst CJ Agency/Company TT Date Performed 7/30/2015 Analysis Time Period NO-BUILD AM PEAK HOUR				Freeway/Dir of Travel EB Weaving Segment Location HIGHLAND AVENUE Analysis Year 2025					
Project De	scription HIGHLA	TO I-95 NB (OFF-RAMP						
Inputs					T				
Weaving configuration Weaving number of lanes, N One-Sided 3					Segment typ				C-D Roadway Multilane Highways
	egment length, L _s ree-flow speed, FF	,		766ft 50 mph	Freeway min		141114		15
i recway ii	cc-now specu, i i	O		oo mpn	Freeway max	ximum capac	ity, C _{IFL}		1900
Convo	rsions to po	h Unde	r Rasa Co	ndition	Terrain type				Level
Jonive	V (veh/h)	PHF	Truck (%)	RV (%)	E _T	E _R	f _{HV}	fp	v (pc/h)
V _{FF}	849	0.92	2	0	1.5	1.2	0.990	1.00	932
V _{RF}	771	0.92	2	0	1.5	1.2	0.990	1.00	846
V _{FR}	550	0.92	2	0	1.5	1.2	0.990	1.00	604
V _{RR}	0	0.92	0	0	1.5	1.2	1.000	1.00	0
V _{NW}	932	0.02						V =	2382
V _W	1450								
VR VR	0.609								
Config	uration Cha	racterist	tics						
	maneuver lanes, N			2 lc	Minimum we	aving lane ch	nanges, LC _{MIN}		1450 lc/h
	ge density, ID	VVL		0.2 int/mi	Weaving lane changes, LC _w				1538 lc/h
Minimum I	RF lane changes,	LC_RF		1 lc/pc	Non-weaving	g lane change	es, LC _{NW}		29 lc/h
Minimum I	FR lane changes,	LC_{FR}		1 lc/pc	Total lane ch	nanges, LC _{ALI}			1567 lc/h
Minimum I	RR lane changes,	LC_{RR}		lc/pc	Non-weaving				14
Weavir	ng Segment	Speed,	Density, I	_evel of	Service,	and Cap	acity		
Weaving s	segment flow rate,	V		2382 pc/h	Weaving inte	ensity factor,	W		0.398
Weaving segment capacity, c _w 3746 veh/h				Weaving segment speed, S				38.2 mph	
Weaving segment v/c ratio 0.630					Average weaving speed, S _w				40.0 mph
Weaving segment density, D 20.8 pc/mi/ln				•	Average non-weaving speed, S _{NW}				35.7 mph
	ervice, LOS			В	Maximum w	eaving length	, L _{MAX}		9125 ft
Notes							1.12		
Chapter 13	segments longer th , "Freeway Merge a mes that exceed the	nd Diverge Se	gments".	· ·		solated merge	and diverge are	eas using the p	procedures of

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			FREEWAY	WEAV			ı			
Genera	al Informati	on			Site Information					
Analyst Agency/Co Date Perfo Analysis T		Freeway/Dir of Travel EB Weaving Segment Location HIGHLAND AVENUE Analysis Year 2025								
Project De	scription HIGHL	AND AVE EB	, FROM I-95 SI	B ON-RAMP	TO I-95 NB (OFF-RAMP				
Inputs										
Weaving n	onfiguration umber of lanes, N egment length, L,	Segment typ				C-D Roadway Multilan Highway				
_	ee-flow speed, Fl		imum speed, ximum capac			1 190 Leve				
Conve	rsions to po	c/h Unde	r Base Co	ndition					Love	
	V (veh/h)	PHF	Truck (%)	RV (%)	E _T	E _R	f _{HV}	fp	v (pc/h)	
V _{FF}	900	0.92	2	0	1.5	1.2	0.990	1.00	988	
V _{RF}	900	0.92	2	0	1.5	1.2	0.990	1.00	988	
V _{FR}	550	0.92	2	0	1.5	1.2	0.990	1.00	604	
V _{RR}	0	0.92	0	0	1.5	1.2	1.000	1.00	0	
/ _{NW}	988							V =	2580	
v _w	1592									
VR	0.617									
Config	uration Cha	aracteris	tics							
Minimum ı	maneuver lanes,	N _{WI}		2 lc	Minimum we	aving lane ch	nanges, LC _{MIN}		1592 lc/	
Interchang	ge density, ID			0.2 int/mi	Weaving lane changes, LC _w					
Minimum I	RF lane changes,	LC_RF		1 lc/pc	Non-weaving lane changes, LC _{NW}					
Minimum I	FR lane changes,	LC_FR		1 lc/pc	Total lane changes, LC _{ALL} 1721					
Minimum I	RR lane changes	, LC _{RR}		lc/pc	Non-weaving vehicle index, I _{NW}					
Weavir	ng Segmen	t Speed,	Density, I	_evel of	Service,	and Cap	acity			
Weaving s	segment flow rate	, V		2580 pc/h	Weaving intensity factor, W 0.4					
Weaving s	segment capacity	, C _w		3722 veh/h	Weaving seg		37.4 mp			
•	segment v/c ratio			Average wea		39.5 mp				
-	segment density,	D	23	3.0 pc/mi/ln		n-weaving spe	1444		34.4 mp	
	ervice, LOS			В	Maximum w	eaving length	, L _{MAX}		9226	
Notes	, ,									
Chapter 13,	segments longer to Freeway Merge a	and Diverge So	egments".			solated merge	and diverge are	eas using the	proceaures of	
	nes that exceed the 2012 University of I			ic icvei di Sel		0 TM Version	6.3	Generated: 8/	4/2015 7:38	

Ganara	I Informati		FREEWAY		Site Info					
Genera	i imormati	OH			Site iiiio	rmation				
Analyst Agency/Coi Date Perfor Analysis Tir	med	Freeway/Dir of Travel EB Weaving Segment Location HIGHLAND AVENUE Analysis Year 2025								
Project Des	cription HIGHLA	AND AVE EB	, FROM I-95 SI	B ON-RAMP	TO I-95 NB (OFF-RAMP				
Inputs										
Weaving se	umber of lanes, Negment length, L	Segment typ		S.,,,,		C-D Roadway Multilan Highway 1				
Freeway fre	ee-flow speed, Fl	FS		50 mph	Freeway max				190	
					Terrain type				Leve	
Conver	sions to po					T _	T .	T .	T	
	V (veh/h)	PHF	Truck (%)	RV (%)	E _T	E _R	f _{HV}	fp	v (pc/h)	
V _{FF}	519	0.92	1	0	1.5	1.2	0.995	1.00	567	
V_{RF}	318	0.92	1	0	1.5	1.2	0.995	1.00	347	
V_{FR}	500	0.92	1	0	1.5	1.2	0.995	1.00	546	
V_{RR}	0	0.92	0	0	1.5	1.2	1.000	1.00	0	
V _{NW}	567							V =	1460	
V_W	893									
VR	0.612									
Configu	uration Cha	aracteris	tics		1					
Minimum m	naneuver lanes,	N_{WL}		2 lc	Minimum weaving lane changes, LC _{MIN} 893 lc/					
Interchange	e density, ID			0.2 int/mi	Weaving lane changes, LC _w 981 ld					
Minimum R	RF lane changes,	LC_RF		1 lc/pc	Non-weaving lane changes, LC _{NW} 0					
Minimum F	R lane changes,	LC_FR		1 lc/pc	Total lane changes, LC _{ALL} 981 ld					
Minimum R	RR lane changes	, LC _{RR}		lc/pc	Non-weaving vehicle index, I _{NW}					
Weavin	g Segmen	t Speed,	Density, I	_evel of	Service,	and Cap	acity			
Weaving se	egment flow rate	, V		1460 pc/h	Weaving inte	ensity factor,	W		0.27	
Weaving se	egment capacity,	, c _w	;	3755 veh/h	Weaving seg		42.0 mp			
Weaving segment v/c ratio 0.387					Average wea	42.5 mp				
•	egment density,	D	1	1.6 pc/mi/ln	Average nor	n-weaving sp	eed, S _{NW}		41.2 mp	
Level of Se	ervice, LOS			Α	Maximum w	eaving length	, L _{MAX}		9160	
Notes										
Chapter 13,	segments longer to "Freeway Merge a	and Diverge S	egments".	_		solated merge	and diverge are	eas using the	procedures of	
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_			FREEWAY	WEAV			I			
Genera	al Informati	on			Site Information					
Analyst Agency/Co Date Perfo Analysis T		Freeway/Dir of Travel EB Weaving Segment Location HIGHLAND AVENUE Analysis Year 2025								
Project De	scription HIGHLA	AND AVE EB	, FROM I-95 SI	B ON-RAMP	TO I-95 NB (OFF-RAMP				
Inputs										
Weaving n	configuration number of lanes, N	Segment typ				C-D Roadway Multilan Highway				
_	egment length, L _s ree-flow speed, Fl	Freeway max	nimum speed ximum capac			1 190				
Conve	rsions to po	c/h Unde	r Base Co	ndition	Terrain type				Leve	
-01140	V (veh/h)	PHF	Truck (%)	RV (%)	E _T	E _R	f _{HV}	fp	v (pc/h)	
V _{FF}	550	0.92	1	0	1.5	1.2	0.995	1.00	601	
V _{RF}	400	0.92	1	0	1.5	1.2	0.995	1.00	437	
V _{FR}	500	0.92	1	0	1.5	1.2	0.995	1.00	546	
/ _{RR}	0	0.92	0	0	1.5	1.2	1.000	1.00	0	
V _{NW}	601	0.02			1.0	1.2	1.000	V =	1584	
V _W	983							•	1001	
VR	0.621									
	uration Cha	aracteris	tics							
	maneuver lanes, l			2 lc	Minimum we	eaving lane cl	nanges, LC _{MIN}		983 lc/	
	ge density, ID	VVL		0.2 int/mi	VIIIV					
	RF lane changes,	LC_{RF}		1 lc/pc	"					
Minimum I	FR lane changes,	LC_{FR}		1 lc/pc	Non-weaving lane changes, LC_{NW} 0 I Total lane changes, LC_{All} 1071 I					
Minimum I	RR lane changes	, LC _{RR}			Non-weaving vehicle index, I _{NW}					
Weavir	ng Segment	t Speed.	Density, I			-	1447			
	segment flow rate			1584 pc/h	Weaving intensity factor, W 0.29					
•	segment capacity,			3728 veh/h	Weaving seg		41.4 mp			
Weaving s	segment v/c ratio			0.423	Average wea		42.0 mp			
•	segment density,	D	12	2.8 pc/mi/ln	Average nor	n-weaving sp	eed, S _{NW}		40.4 mp	
Level of S	ervice, LOS			В	Maximum w	eaving length	ı, L _{MAX}		9270	
Notes										
Chapter 13	segments longer to Freeway Merge a	and Diverge S	egments".	-		solated merge	and diverge are	eas using the	procedures of	
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RT 128 NEW C-D ROAD SB, FROM HIGHLAND AVE WB ON-RAMP TO NEW C-D ROAD SB OFF-RAMP

	W 0 D 110/12 02	•	REEWA)						
Genera	I Informati	on			Site Info	rmation			
Analyst Agency/Co Date Perfo Analysis Ti	rmed me Period	Freeway/Dir of Travel SB Weaving Segment Location RT 128 SB C-D ROAD Analysis Year 2025							
	scription RT 128	NEW C-D R	DAD SB, FROI	M HIGHLAN	D AVE WB O	N-RAMP TO	NEW C-D RO	AD SB OFF-	RAMP
Inputs					I				
Weaving no	onfiguration umber of lanes, N			One-Sided 2	Segment typ	е			C-D Roadway Multilane Highways
_	egment length, L			457ft	Freeway min	imum speed,	, S _{MIN}		15
Freeway fre	ee-flow speed, Fl	FS		55 mph	Freeway max	ximum capac	ity, C _{IFL}		2350
		<i>"</i>	D •	1141	Terrain type				Leve
Conver	rsions to po		1			 	<u> </u>		1 //->
	V (veh/h)	PHF	Truck (%)	RV (%)	E _T	E _R	f _{HV}	fp	v (pc/h)
V _{FF}	934	0.92	3	0	1.5	1.2	0.985	1.00	1030
V_{RF}	344	0.92	3	0	1.5	1.2	0.985	1.00	380
V_{FR}	771	0.92	3	0	1.5	1.2	0.985	1.00	851
V_{RR}	0	0.92	0	0	1.5	1.2	1.000	1.00	0
V_{NW}	1030							V =	2261
V_W	1231								
VR	0.544								
Config	uration Cha	aracteris	tics		1				
Minimum r	naneuver lanes,	N_{WL}		2 lc	Minimum weaving lane changes, LC_{MIN}				1231 lc/h
Interchang	e density, ID			0.5 int/mi	Weaving lane changes, LC _w				1258 lc/h
Minimum F	RF lane changes,	LC_RF		1 lc/pc	Non-weaving	g lane change	es, LC _{NW}		75 lc/h
Minimum F	R lane changes,	LC _{FR}		1 lc/pc	Total lane ch	nanges, LC _{ALI}	L		1333 lc/h
Minimum F	RR lane changes	, LC _{RR}		lc/pc	Non-weaving vehicle index, I _{NW} 2				
Weavin	ig Segmen	t Speed,	Density, I	Level of	Service,	and Cap	acity		
Weaving s	egment flow rate	, V		2261 pc/h	Weaving inte	ensity factor,	W		0.526
Weaving s	egment capacity	, c _w		3440 veh/h	Weaving seg		41.0 mph		
Weaving s	egment v/c ratio			0.648	Average wea		41.2 mph		
	egment density,	D	2	7.6 pc/mi/ln	Average non-weaving speed, S _{NW}				40.7 mph
Level of Se	ervice, LOS			С	Maximum w	eaving length	ı, L _{MAX}		8351 ft
Chapter 13,	segments longer to "Freeway Merge anes that exceed the	and Diverge Se	gments".	-		solated merge	and diverge are	eas using the	procedures of

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RT 128 NEW C-D ROAD SB, FROM HIGHLAND AVE WB ON-RAMP TO NEW C-D ROAD SB OFF-RAMP

		F	REEWAY	WEAV	NG WOF	RKSHEE	Γ		
General	Information	on			Site Information				
Analyst Agency/Con Date Perfori Analysis Tin	med	Freeway/Dir of Travel SB Weaving Segment Location RT 128 SB C-D ROAD Analysis Year 2025							
Project Des	cription RT 128	D AVE WB O	N-RAMP TO	NEW C-D RO	AD SB OFF-	RAMP			
Inputs					•				
weaving number of lanes, N 2					rreeway minimum speed, S _{MIN}				C-D Roadway/ Multilane Highways 15
-	·				Terrain type	ximum capac	ity, C _{IFL}		2350 Level
Convers	sions to po	:/h Unde	r Base Co	ndition					Level
	V (veh/h)	PHF	Truck (%)	RV (%)	E _T	E _R	f _{HV}	fp	v (pc/h)
V _{FF}	1030	0.92	3	0	1.5	1.2	0.985	1.00	1136
V _{RF}	350	0.92	3	0	1.5	1.2	0.985	1.00	386
V _{FR}	900	0.92	3	0	1.5	1.2	0.985	1.00	993
V _{RR}	0	0.92	0	0	1.5	1.2	1.000	1.00	0
V _{NW}	1136							V =	2515
V _W	1379								
VR	0.548								
Configu	ration Cha	racterist	ics						
Minimum m	aneuver lanes, N	N _{WI}		2 lc	Minimum we	aving lane ch	nanges, LC _{MIN}		1379 lc/h
Interchange	density, ID			0.5 int/mi	Weaving lane changes, LC _w				1406 lc/h
Minimum R	F lane changes,	LC_{RF}		1 lc/pc	Non-weaving	g lane change	es, LC _{NW}		97 lc/h
Minimum Fl	R lane changes,	LC_{FR}		1 lc/pc	Total lane ch	nanges, LC _{ALI}	_		1503 lc/h
Minimum R	R lane changes,	LC_RR		lc/pc	Non-weaving	g vehicle inde	ex, I _{NW}		26
Weaving	g Segment	Speed,	Density, I	_evel of	Service,	and Cap	acity		
	gment flow rate,			2515 pc/h		ensity factor, gment speed,			0.578 39.7 mph
Weaving segment capacity, c _w 3434 veh/h Weaving segment v/c ratio 0.722					Average weaving speed, S _w				40.3 mph
	gment density, [)	3′	0.722 1.6 pc/mi/ln	Average non-weaving speed, S _{NW}				39.0 mph
_	Level of Service, LOS					Maximum weaving length, L _{MAX}			
Notes						<u> </u>	IVIA		8397 ft
a. Weaving s Chapter 13, '	egments longer the Freeway Merge a es that exceed the	nd Diverge Se	gments".			solated merge	and diverge are	eas using the	procedures of

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RT 128 NEW C-D ROAD SB, FROM HIGHLAND AVE WB ON-RAMP TO NEW C-D ROAD SB OFF-RAMP

	<u> </u>	<u>, </u>	REEWAY						
General	Information	on			Site Information				
Analyst CJ Agency/Company TT Date Performed 7/30/2015 Analysis Time Period NO-BUILD PM PEAK PERIOD					Freeway/Dir of Travel SB Weaving Segment Location RT 128 SB C-D ROAD Analysis Year 2025				
	cription RT 128	D AVE WB O	N-RAMP TO	NEW C-D RO	AD SB OFF-	RAMP			
Inputs					T				
Weaving co	nfiguration mber of lanes, N			One-Sided 2	Segment typ	е			C-D Roadway Multilane Highways
	gment length, L _s			457ft	Freeway min	imum speed,	S _{MIN}		15
Freeway fre	e-flow speed, FF	-8		55 mph	Freeway max	ximum capac	ity, C _{IFL}		2350
	• 4	<i>,</i> , , , , ,		1141	Terrain type				Leve
Convers	sions to po	1			1				
	V (veh/h)	PHF	Truck (%)	RV (%)	E _T	E _R	f _{HV}	fp	v (pc/h)
V _{FF}	883	0.92	3	0	1.5	1.2	0.985	1.00	974
V_{RF}	497	0.92	3	0	1.5	1.2	0.985	1.00	548
V_{FR}	318	0.92	3	0	1.5	1.2	0.985	1.00	351
V_{RR}	0	0.92	0	0	1.5	1.2	1.000	1.00	0
V_{NW}	974							V =	1873
V_W	899								
VR	0.480								
Configu	ration Cha	racterist	tics						
Minimum m	aneuver lanes, N	N_{WL}		2 lc	Minimum weaving lane changes, ${\rm LC}_{\rm MIN}$				899 lc/h
Interchange	edensity, ID			0.5 int/mi	Weaving lane changes, LC _W				926 lc/h
Minimum R	F lane changes,	LC_{RF}		1 lc/pc	Non-weaving	g lane change	es, LC _{NW}		63 lc/h
Minimum Fl	R lane changes,	LC_{FR}		1 lc/pc	Total lane ch	nanges, LC _{ALI}	_		989 lc/h
Minimum R	R lane changes,	LC_{RR}		lc/pc	Non-weaving	g vehicle inde	ex, I _{NW}		22
Weaving	g Segment	Speed,	Density, I	_evel of	Service,	and Cap	acity		
Weaving se	gment flow rate,	٧		1873 pc/h	Weaving inte	ensity factor,	W		0.416
Weaving segment capacity, c _w 3555 veh/h					Weaving segment speed, S				43.7 mph
Weaving se	gment v/c ratio			0.519	Average weaving speed, $S_{\rm W}$				43.3 mph
Weaving segment density, D 21.5 pc/mi/ln					Average non-weaving speed, S_{NW}				44.0 mph
Level of Sei	rvice, LOS			В	Maximum w	eaving length	, L _{MAX}		7593 ft
Notes									
Chapter 13, "	egments longer the Freeway Merge a ses that exceed the	nd Diverge Se	gments".	· ·		solated merge	and diverge are	eas using the p	procedures of

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RT 128 NEW C-D ROAD SB, FROM HIGHLAND AVE WB ON-RAMP TO NEW C-D ROAD SB OFF-RAMP

		F	REEWAY	WEAV	NG WOF	RKSHEE	Γ		
General	Informati	on			Site Information				
Analyst CJ Agency/Company TT Date Performed 7/30/2015 Analysis Time Period BUILD PM PEAK PERIOD					Freeway/Dir of Travel SB Weaving Segment Location RT 128 SB C-D ROAD Analysis Year 2025				
Project Desc	cription RT 128	D AVE WB O	N-RAMP TO	NEW C-D RO	AD SB OFF-	RAMP			
Inputs					T				
Weaving cor Weaving nur	nfiguration mber of lanes, N	N		One-Sided 2	Segment typ	e			C-D Roadway Multilane Highways
	gment length, L			457ft	Freeway min	imum speed.	Sun		Tilgriways
Freeway free	e-flow speed, Fl	FS		55 mph	Freeway max				2350
					Terrain type	'	3. ILT		Leve
Convers	sions to po	c/h Unde	r Base Co	ndition					
	V (veh/h)	PHF	Truck (%)	RV (%)	E _T	E _R	f _{HV}	fp	v (pc/h)
V_{FF}	850	0.92	3	0	1.5	1.2	0.985	1.00	938
V_{RF}	500	0.92	3	0	1.5	1.2	0.985	1.00	552
V_{FR}	400	0.92	3	0	1.5	1.2	0.985	1.00	441
V_{RR}	0	0.92	0	0	1.5	1.2	1.000	1.00	0
V _{NW}	938							V =	1931
V _W	993								
VR	0.514								
Configu	ration Cha	aracterist	ics						
Minimum ma	aneuver lanes,	N _{WI}		2 lc	Minimum we	aving lane ch	nanges, LC _{MIN}		993 lc/h
Interchange	density, ID			0.5 int/mi	Weaving lane changes, LC _w				1020 lc/h
Minimum RF	= lane changes,	LC _{RF}		1 lc/pc	Non-weaving lane changes, LC _{NW}				56 lc/h
Minimum FF	R lane changes,	LC _{FR}		1 lc/pc	Total lane ch	nanges, LC _{ALI}	_		1076 lc/h
Minimum RF	R lane changes	, LC _{RR}		lc/pc	Non-weaving				21
Weaving	g Segment	t Speed,	Density, I	Level of	Service,	and Cap	acity		
Weaving see	gment flow rate	. V	•	1931 pc/h	Weaving inte	ensity factor,	W		0.444
	gment capacity,			3494 veh/h	Weaving seg		42.9 mph		
Weaving seg	gment v/c ratio			0.544	Average weaving speed, S _w				42.7 mph
	gment density,	D	22	2.5 pc/mi/ln	Average non-weaving speed, S _{NW}				43.2 mph
Level of Ser	vice, LOS			В	Maximum weaving length, L _{MAX} 7993				7993 ft
Notes									
Chapter 13, "I	egments longer to Freeway Merge as that exceed the	and Diverge Se	gments".	· ·		solated merge	and diverge are	eas using the	procedures of

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